APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,173	08/30/2001	Tsutomu Yamazaki	011350-284	6797

7590 02/24/2006	EXAMINER

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ART UNIT	PAPER NUMBER
2627	

DATE MAILED: 02/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	**Applicant(s)**
Office Action Summary	09/942,173	YAMAZAKI, TSUTOMU
	Examiner	**Art Unit**	
	Colin M. LaRose	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 December 2005*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,9-19,22-32,35 and 36* is/are rejected.

7)☒ Claim(s) *7,8,20,21,33 and 34* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Arguments and Amendments

1.   Applicant's amendments and arguments filed 20 December 2005, have been entered and

made of record.

Claim Rejections - 35 USC § 112

2.   The previous rejections under 35 USC § 112 have been withdrawn in view of Applicant's

amendments to claims 7, 8, 20, 21, 33, and 34.

Response to Arguments and Amendments

3.   Applicant's amendments and arguments with respect to claims 1, 14, 24, and 27 have

been considered and are not persuasive for following reasons.

        Claims 1, 14, 24, and 27 have been amended to denote that "the second image data [has]

a plurality of different colors." Applicant appears to admit that Bates discloses such a feature –

that is, Bates' background objects contain a plurality of different colors. See Applicant's

Remarks, p 17, acknowledging that Bates' background objects can be "multicolored."

        Claims 1, 14, 24, and 27 have also been amended to denote that the uniform adjusting

color is specified based on "all" the colors of the second image data (e.g. Bates' background

object). Applicant argues that Bates does not disclose such a feature because Bates utilizes, at

best, only the "top few" colors contained in a background object for determining a uniform

adjusting color (see Applicant's Remarks, p. 17). However, Examiner respectfully disagrees with

this assertion for the following reasons.

Figure 5 of Bates shows his method for determining the color of an object (e.g. a background object). As shown, when the object is multicolored, the "top n color categories" are determined as the object's color (step 590). These colors are essentially the "dominant colors" of the object (see column 21, lines 36-37). Bates preferably utilizes the top three colors (column 21, lines 19-22), but apparently any arbitrary "n" number of top colors could be utilized.

Nevertheless, Bates discloses the scenario where the background object contains only two colors. In this situation, both colors are utilized for correcting color contrast problems since the number of colors (2) is less than the preferred number of colors utilized for comparison (3). See column 21, lines 39-62.

Therefore, Bates is considered to disclose specifying a uniform adjusting color based on *all* the colors of the second image data, as claimed.

4.   Regarding claim 17, Applicant argues there was no "desirability" or motivation pointed out by the previous Office action for the proposed combination, and as such, the combination is invalid (see Applicant's Remarks, p. 19). Examiner respectfully disagrees with such an assertion insofar as the disclosures of both Bates and Honda are directed to the same problem of improving the readability of text against multicolored backgrounds and both disclosures extract the background color to be utilized for determining a suitable foreground color in nearly identical fashions.

Bates determines the background color(s) according to the process in figure 5, which extracts the top n dominant colors of the background area, as discussed above. Essentially, Bates compiles a weighted histogram and then extracts the top n colors from the histogram. Bates

refers to this process as the "preferred" way of determining the color of a background, but he

recognizes that the ways of determining the color of objects "are well known in the art" (column

12, lines 10-15).

Honda discloses one of the "well known methods" for determining the color of a

predefined area – extracting the average color thereof. Like Bates, Honda compiles an histogram

of the colors within the area (figure 3), and extracts the average color therefrom. Based on this

average color, the text to be overlayed is adjusted in order to render an "easy-to-view image

display" (Honda, p. 10). Based on this teaching by Honda that it was conventional to utilize the

average color of a background area for ascertaining the "easy-to-view" color of foreground

objects, the proposed combination would have been readily apparent to those skilled in the art of

image processing.

Also, Applicant argues that the combination is invalid because "Honda's averaging of

background colors is not merely determining background color as described in Bates" (see

Applicant's Remarks, p. 20). Notwithstanding the differences between Bates' and Honda's

methods of "determining color" as pointed out above, Honda's averaging method is a

conventional technique for determining a representative background color based on which the

color of foreground objects are to be adjusted for improved readability, and those skilled in the

art would have recognized the advantages of employing Honda's method at least for the reasons

that it is both a conventional and effective means for achieving the stated goals of both Honda

and Bates.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6.   Claims 1-3, 9, 11, 14-16, 22-29, and 35 are rejected under 35 U.S.C. 102(e) as being

anticipated by U.S. Patent 6,809,741 by Bates et al. ("Bates").

        Regarding claims 1, 14, 24, and 27, Bates discloses an image processing

device/method/program comprising:

        a first color detection means for detecting colors of a first image data by each processing

unit (computer 100 detects the colors of the pixels ("processing units") for a text object – see

step 320, figure 3);

        a second color detection means for detecting colors of a second image data that serves as

the first image data's background by each processing unit, the second image data having a

plurality of different colors (computer 100 detects the colors of the pixels for the background –

see step 307, figure 3; see also figure 5); and

        a color adjusting means for specifying a uniform adjusting color, based on the colors of

the first image data and all the colors of the second image data, that makes the first image data

recognizable against all colors of the second image data that serves as the first image data's

background, concerning the first image data that have approximately equal colors (i.e. when the

text and background colors exhibit a contrast problem (step 330), a new color for the text and/or

background ("uniform adjusting color(s)") are generated at step 335 – see also figure 7; see also

column 21, lines 36-62 where "all" the colors of the second image data are utilized).

Regarding claims 2, 15, 25, and 28, Bates discloses an image processing

device/method/program as claimed in claims 1, 14, and 24, further comprising: an image

synthesizing means for synthesizing the first image data converted into said adjusting color with

said second image data (i.e. computer 100 synthesizes the text image data that has been

converted to a new color with the background image data).

Regarding claims 3, 16, 26, and 29, Bates discloses an image processing

device/method/program as claimed in claims 1, 14, and 24, wherein said processing unit is a

pixel (i.e. the image data may be in a GIF or JPEG format and therefore, consists of pixels – see

e.g. column 12, lines 2-6).

Regarding claims 9, 22, and 35, Bates discloses an image processing device/program as

claimed in claims 1 and 14, wherein said first image data is an image data that represents

character images (i.e. first image data is text).

Regarding claims 11 and 23, Bates discloses preparing an electronic file based on the

image data synthesized by the image synthesizing means (e.g. a new HTML file is created with

the new color combinations – see column 16, lines 18-22).

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 4, 6, 10, 17, 19, 30, 32, and 36 are rejected under 35 U.S.C. 103(a) as being

unpatentable over U.S. Patent 6,809,741 by Bates et al. ("Bates") in view of Translation of

Japanese Patent 09-025285A by Honda ("Honda").

Regarding claims 4, 17, and 30, Bates discloses an image processing device/program as

claimed in claims 1 and 14, further comprising:

a first memory means (120) for storing the colors of the first image data by each of

the approximately equal colors (i.e. the values of the detected colors are necessarily stored

somewhere in memory); and

a second memory means (120) for storing the colors of the second image data that serves

as the first image data's background, said colors of which are correlated to each of the

corresponding colors of the first image data that are stored in said first memory means (i.e. the

values of the detected colors are necessarily stored somewhere in memory, and those colors of

the background object are correlated, or correspond, to the text colors that are overlaid thereon);

Bates teaches that one way of determining the background or foreground colors is

through an histogram accumulation method, such as shown in figure 5. However, Bates is silent

to calculating average values of the background image data (i.e. the second image data), and

using the average background color and the text color to determine the uniform adjusting color,

as claimed.

Honda discloses an image processing system that makes text more legible by altering the

colors of the text so that it exhibits higher contrast as compared with the background on which

the text is overlaid. In particular, Honda discloses basing the determination of the new text color

on the average of the background colors (page 5 of Honda: "overlay pixel value determination circuit ... computes the average pixel value (density value) of a certain region [of the background image]"). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Bates by Honda to calculate the average value of the background colors per Honda's teachings and determine the uniform adjusting color based on the colors of the first image data (i.e. the text object) and the average of the second image data (i.e. background colors), since Bates teaches that the manner of detecting the colors of objects is well-known in the art (column 12, lines 10-13), and Honda discloses that one technique for determining a background color is to compute the average of color values in the background. Bates' uniform adjusting color would then be based on the detected text object colors and the average color values of the background.

Regarding claims 10 and 36, Bates discloses an image processing device as claimed in claim 1, further comprising: a third memory means for storing said second image data (i.e. memory 120).

Regarding claims 6, 19, and 32, Honda discloses an image processing device/program as claimed in claims 4 and 17, wherein said average color value calculating means calculates the average value of the coordinate values of the colors of the second image data in a specified color system (page 5 of Honda: "overlay pixel value determination circuit ... computes the average pixel value (density value) of a certain region [of the background image]" – this computation is done in the RGB color system).

9.   Claims 5, 18, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent 6,809,741 by Bates et al. ("Bates") in view of Translation of Japanese Patent 09-025285A

by Honda ("Honda"), and further in view of U.S. Patent 5,930,385 by Fujimoto et al.

("Fujimoto").

Regarding claims 5, 18, and 31, Bates and Honda is silent to a judging means for judging

that colors of the first image data are approximately equal when a sum of squares of the

differences of their coordinate values in a specified color system is less than a specified value.

Bates, for instance, equates two colors when the colors are within a certain range (see delta

values, figure 7)

Fujimoto discloses an image processing system adapted to perform a color conversion on

an input image, such as converting a color image to a monochrome image. Figure 2 shows a

method for such conversion. Figure 3 shows the process of region dividing, which is included in

the method of figure 2. In dividing the image into color regions, it is determined whether

adjacent pixels have the same color at step 2-3. As figure 8 shows, determining whether two

colors are the same involves determining whether the sum of squares of a difference in color

values is less than a threshold.

It would have been obvious to modify Bates and Honda by Fujimoto to include means to

judge the similarity of input character colors, as claimed, since Fujimoto discloses that

generating monochrome text involves judging the similarity of colors based on the sum of

squares of the differences of coordinate values in relation to a threshold.

10.   Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent 6,809,741 by Bates et al. ("Bates") in view of U.S. Patent 5,872,573 by Adegeest.

Regarding claim 12, Bates does not expressly disclose obtaining the first and second

image data via a scanner, as claimed.

Adegeest discloses a system for producing legible text to be overlaid on a background,

similar to that of Bates. In particular, Adegeest discloses that it is conventional to obtain input

images via a scanner for the purposes of adjusting text and background so that the text is more

legible against the background. It would have been obvious to modify Honda by Adegeest to

input the second image via a scanner, as claimed, since Adegeest shows that it was conventional

to input images by electronically scanning documents with a scanner.

Regarding claim 13, Bates is silent to a printer unit for printing images on recording

media based on the synthesized image data.

Adegeest discloses a system for producing legible text to be overlaid on a background,

similar to that of Bates. In particular, Adegeest discloses that it is conventional to output

processed images via a printer 23, figure 1. It would have been obvious to modify Honda by

Adegeest to output the synthesized image via a scanner, as claimed, since Adegeest shows that

it was conventional to output images using a printer.

Allowable Subject Matter

11.   Claims 7, 8, 20, 21, 33, and 34 would be allowable if rewritten to include all of the

limitations of the base claim and any intervening claims.

Conclusion

12.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Colin M. LaRose whose telephone number is (571) 272-7423. If

attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge

Wu, can be reached on (571) 272-7429. The fax phone number for the organization where this

application or proceeding is assigned is (571) 273-8300. Any inquiry of a general nature or

relating to the status of this application or proceeding should be directed to the TC 2600

Customer Service Office whose telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR
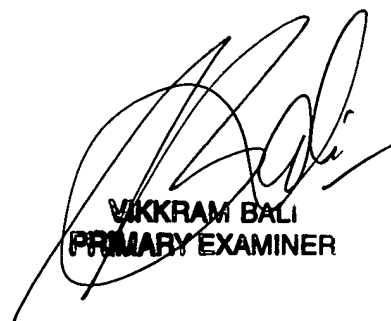
system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

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CML
Group Art Unit 2627
3 February 2006

VIKKRAM BALI
PRIMARY EXAMINER